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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/623,180	07/21/2003	Antonius Johannes Van Der Net	081468-0305146	4722

909 7590 02/09/2006

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EXAMINER	
FULLER, RODNEY EVAN	

ART UNIT	PAPER NUMBER
2851	

DATE MAILED: 02/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/623,180	VAN DER NET ET AL.	
	Examiner	Art Unit	
	Rodney E. Fuller	2851	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 December 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *16 December 2005* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

RODNEY FULLER
PRIMARY EXAMINER

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *7/29/05; 12/2/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Remarks

In response to applicant's Amendment, dated December 2, 2005, the examiner acknowledges the addition of claims 14-20. Claims 1-20 are pending.

The drawings were objected to as being informal in the Office Action mailed June 6, 2005. The Objection to the Drawings is maintained. The formal drawings submitted on December 16, 2005 appear to be identical to the original drawings, except for being reduced in size. The drawings are still considered informal. The lines and numbering are unclear and "fuzz" (i.e., lacks clarity and definition). Several of the reference labels appear to be hand drawn and are of such a font size that printing in any subsequent patent would likely be unclear. As an example, reference number "1524" in Figure 3 could easily be read as "4529". Further, the drawings appear to be a reduced magnification copy of the original drawings with additional artifacts.

Regarding the 35 U.S.C. 102(e) rejection of claims 1 and 9-13 as being anticipated by Van Schaik, et al. (US 6,828,569), the applicant makes the argument that "there is no disclosure or suggestion by Van Schaik et al. of a purge gas mixture generator comprising a moisturizer configured to add moisture to a purge gas." The applicant states that it "appears that the examiner is relying upon the theory of inherency to conclude that Van Schaik et al. anticipates the claimed invention." The examiner had indicated in the rejection that "The purge gas supply (ref.#4) must contain a "moisturizer" in order to provide the gas mixture with the added vapor." The examiner acknowledges that Van Schaik does not specifically disclose "a moisturizer" to add

moisture to the purge gas. The examiner maintains that "a moisturizer" would be inherent to the disclosure of Van Schaik. Alternatively, if "a moisturizer" is not considered inherent, it would be obvious in light of Koizumi (US 4,704,348). Thus, the rejection set forth in the Office Action mailed June 26, 2005 has been changed to a 35 U.S.C. 102/103 rejection.

The relevant sections of the MPEP is noted below:

MPEP 2112 - III. A REJECTION UNDER 35 U.S.C. 102/103 CAN BE MADE WHEN THE PRIOR ART PRODUCT SEEMS TO BE IDENTICAL EXCEPT THAT THE PRIOR ART IS SILENT AS TO AN INHERENT CHARACTERISTIC

Where applicant claims a composition in terms of a function, property or characteristic and the composition of the prior art is the same as that of the claim but the function is not explicitly disclosed by the reference, the examiner may make a rejection under both 35 U.S.C. 102 and 103, expressed as a 102/103 rejection. "There is nothing inconsistent in concurrent rejections for obviousness under 35 U.S.C. 103 and for anticipation under 35 U.S.C. 102." In re Best, 562 F.2d 1252, 1255 n.4, 195 USPQ 430, 433 n.4 (CCPA 1977).

IV. EXAMINER MUST PROVIDE RATION-ALE OR EVIDENCE TENDING TO SHOW INHERENCY

The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. In re Rijckaert, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993) (reversed rejection because inherency was based on what would result due to optimization of

conditions, not what was necessarily present in the prior art); In re Oelrich, 666 F.2d 578, 581-82, 212 USPQ 323, 326 (CCPA 1981). "To establish inherency, the extrinsic evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill.

Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.' " In re Robertson, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999) (citations omitted)

"In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." Ex parte Levy, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original) In re Schreiber, 128 F.3d at 1478, 44 USPQ2d at 1432.

V. ONCE A REFERENCE TEACHING PRODUCT APPEARING TO BE SUBSTANTIALLY IDENTICAL IS MADE THE BASIS OF A REJECTION, AND THE EXAMINER PRESENTS EVIDENCE OR REASONING TENDING TO SHOW INHERENCY, THE BURDEN SHIFTS TO THE APPLICANT TO SHOW AN UNOBVIOUS DIFFERENCE

Drawings

1. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because the drawings are informal. Specifically, the lines and numbering are unclear and "fuzzy" (i.e., lacks clarity and definition). The drawings appear to be a poorly transmitted fax copy of the drawings. Applicant is advised to employ the services of a competent patent draftsperson outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102 / 103

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1 and 9-13 are rejected under 35 U.S.C. 102(e) as anticipated by Van Schaik, et al. (US 6,828,569) or, in the alternative, under 35 U.S.C. 103(a) as obvious over Van Schaik, et al. (US 6,828,569) in view of Koizumi, et al. (US 4,704,348).

Regarding claims 1 and 11-13, Van Schaik discloses "an illuminator configured to provide a projection beam of radiation (Fig. 1, ref.# PB, column 5, line 56); a support structure (Fig. 1, ref.# MT) configure to support a patterning device (Fig. 1, ref.# MA), the patterning device configured to pattern the projection beam according to a desired pattern; a substrate table (Fig. 1, ref.# WT) configured to hold a substrate (Fig. 1, ref.# W); a projection system (Fig. 1, ref.# PL) configured to project the patterned beam onto a target portion of the substrate; and at least one purge gas supply system (column 7, lines 1-3) configured to provide a purge gas to at least part of the lithographic projection apparatus (Fig. 2, ref.# 2), the at least one purge gas supply system comprising: a purge gas mixture generator (Fig. 2, ref.# 4) comprising a moisturizer configured to add moisture to a purge gas (column 7, lines 20-21), the purge gas mixture generator configured to generate a purge gas mixture, which purge gas mixture comprises at least one purge gas and the moisture (column 7, lines 20-21); and a purge gas mixture outlet connected to the purge gas mixture generator configured to supply the purge gas mixture to the at least part of the lithographic projection apparatus (Fig. 2, ref.# 5, column 7, lines 3-5)."

The purge gas supply (ref.# 4) must inherently contain a "moisturizer" in order to provide the gas mixture with the added water vapor. The purge gas may contain one or a mixture of oxygen containing species selected from water, nitogren oxide and oxygen containing hydrocarbons. (column 7, lines 20-21). To obtain a purge gas that contains water there must be some apparatus that comprises a means to add water to the gas. Thus, in order for the supply (ref.# 4) to have a purge gas with a mixture of water, there must have been a "purge gas mixture generator comprising a moisturizer configured to add moisture to the purge gas." Thus, the examiner maintains that this is a fact and/or technical reason "to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art."

Regarding claim 9, Van Schaik discloses "wherein the moisture includes water vapor." (column 7, lines 20-21)

Regarding claim 10, Van Schaik discloses "wherein the purge gas mixture contains between at least 20% and not more than 70% relative humidity water vapor." (column 9, lines 39-40)

Alternatively, if the limitation of a "purge gas mixture generator comprising a moisturizer configured to add moisture to a purge gas" is not considered inherent. Then, the limitation would be obvious in view of the teaching of Koizumi (US 4,704,348).

Koizumi teaches that a purge gas mixture generator comprising a moisturizer (Fig. 1, ref.# 16) to add moisture to a purge gas (Fig. 1, ref.# 11) is routine in the art. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Van Schaik to replace the purge gas supply with a "gas

mixture generator" that comprises a "moisturizer" (i.e., humidifier) along with a gas supply. The ordinary artisan would have been motivated to modify Van Schaik in the manner describe above to allow the operator to vary the amount of water vapor in order to control the level of transmission loss (Van Schaik, column 8, 3rd paragraph) or alternatively control the cleaning time (Van Schaik, column 9, 7th paragraph).

5. Claims 1-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Koizumi, et al. (US 4,704,348).

Regarding claims 1 and 11-13, Koizumi discloses "an illuminator (Fig. 7, ref.# 41) configured to provide a projection beam of radiation; a support configure to support a patterning device (Fig. 2, ref.# 6), the patterning device configured to pattern the beam according to a desired pattern (column 3, lines 3-4); a substrate table (Fig. 2, ref.# 1) configured to hold a substrate (Fig. 2, ref.# 3); a projection system (Fig. 2, ref.# 5) configured to project the patterned beam onto a target portion of the substrate; and at least one purge gas supply system (Fig. 2, ref.#s 10-20) configured to provide a purge gas (Fig. 2, ref.# 11) to at least part of the lithographic projection apparatus (column 4, lines 21-23), the at least one purge gas supply system comprising: a purge gas mixture generator comprising a moisturizer (Fig. 2, ref.# 16) configured to add moisture to a purge gas (Fig. 2, ref.# 11), the purge gas mixture generator configured to generate a purge gas mixture (column 3, lines 42-44), which purge gas mixture comprises at least one purge gas and the moisture (column 3, lines 53-54); and a purge gas mixture outlet connected to the purge gas mixture generator configured to supply the purge gas

mixture to the at least part of the lithographic projection apparatus (column 3, lines 10-13)."

Regarding claims 2 and 14, Koizumi discloses "wherein the moisturizer comprises: a vessel (Fig. 3, ref.# 23) with at least one gas inlet (Fig. 3, ref.# 25) and gas outlet (Fig. 3, ref.# 26), the at least one gas inlet and gas outlet being connected to each other via a moisturizing connection (Fig. 3, ref.# 27), such that in case a purge gas flows through the moisturizing connection, the purge gas is fed through a liquid present in the vessel and the purge gas is moisturized (column 3, lines 39-44)."

Regarding claims 3 and 15, Koizumi discloses "a dry gas inlet (Fig. 3, ref.# 25), connected to the at least one gas outlet (Fig. 3, ref.# 26), configured to mix a non-moisturized purge gas with the moisturized purge gas fed through the liquid to thereby obtain the purge gas mixture (column 3, lines 39-44)."

Regarding claims 4 and 16, Koizumi discloses "wherein the moisturizing connection is a saturating connection for feeding the purge gas through the liquid such that the purge gas is moisturized to saturation with the moisture (column 3, lines 39-44."

Regarding claims 5 and 17, Koizumi discloses "a control device connected to the vessel configured to control at least an amount of moisture present in the purge gas mixture." (column 3, line 65 – column 4, line 1)

Regarding claims 6 and 18, Koizumi discloses "wherein the purge gas mixture generator further comprises at least one regenerable filter (Fig. 3, ref.# 13, 17) device configure to filter at least one undesired component out of at least one of: the purge gas, the moisture or the purge gas mixture (column 3, lines 56-57)."

Regarding claims 7 and 19, Koizumi discloses "wherein the at least one regenerable filter device comprises two regenerable filter devices (Fig. 3, ref.# 13, 17) connected in parallel, the filter devices can be regenerated in an alternating manner to allow continuous filtering."

Regarding claim 8, Koizumi discloses "wherein the purge gas supply system further comprises a purge gas outlet (Fig. 2, ref.# 19) configured to provide the purge gas substantially without moisture to another part of the lithographic projection apparatus (Fig. 2, ref.# 21)." (column 3, lines 18-25)

Regarding claims 9 and 20, Koizumi discloses "wherein the moisture includes water vapor." (column 3, line 67)

Regarding claims 10, Koizumi discloses "wherein the purge gas mixture contains between at least 20% and not more than 70% relative humidity water vapor." (column 4, line 11)

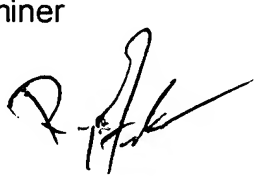
Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rodney E. Fuller whose telephone number is 571-272-2118. The examiner can normally be reached on 8:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on 571-272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Rodney E Fuller
Primary Examiner
Art Unit 2851



February 1, 2006